BELDEN
SENDING ALL THE RIGHT SIGNALS

Part Number: 3633

CAT6++ Horizontal Bonded-Pair, 4pr, UTP, LS-PVC Jkt, CMP

Product Description

CAT6++ (400MHz), 4-Bonded-pairs, U/UTP-unshielded, Plenum-CMP, Premise Horizontal cable, 23 AWG solid bare copper conductors, FEP insulation, patented X-spline, ripcord, Flamarrest® PVC jacket.

Technical Specifications

Product Overview

Environmental Space:	Plenum
Suitable Applications:	Premise Horizontal Cable, Gigabit Ethernet, POE, POE+, 100BaseTX, 100BaseVG ANYLAN, 155ATM, 622ATM, NTSC/PAL Component or Composite Video, AES/EBU Digital Audio, AES51, RS-422, Noisy Environments

Physical Characteristics (Overall)

Conductor

AWG	Stranding	Material	No. of Pairs
23	Solid	BC - Bare Copper	4

Conductor Count:	8
Total Number of Pairs:	4
Conductor Size:	23 AWG

Insulation

Material
FEP - Fluorinated Ethylene Propylene

Bonded-Pair:	Yes

Color Chart

Number	Color
1	White/Blue Stripe & Blue
2	White/Orange Stripe & Orange
3	White/Green Stripe & Green
4	White/Brown Stripe & Brown

Outer Jacket Material

Material	Material Trade Name	Nominal Diameter	Nominal Wall Thickness	Ripcord	Separator Material
LS PVC - Low Smoke Polyvinyl Chloride	Flamarrest®	0.230 in	0.018 in	Yes	Patented X-Spline Center Member

Electrical Characteristics

Conductor DCR

Max. Conductor DCR	Max. DCR Unbalance
77 Ohm/km	3 %

Capacitance

Max. Capacitance Unbalance	Nom.Mutual Capacitance
90 pF/100m	15.5 pF/ft

Delay

Frequency [MHz]	Max. Delay	Max. Delay Skew	Nominal Velocity of Propagation (VP) [%]	Typical Delay Skew
100 MHz	537.6 ns/100m	35 ns/100m	72 %	30 ns/100m

High Freq

Frequency [MHz]	Max. Insertion Loss (Attenuation)	Min. NEXT [dB]	Min. PSNEXT [dB]	Min. ACR [dB]	Min. PSACR [dB]	Min. ACRF (ELFEXT) [dB]	Min. PSACRF (PSELFEXT) [dB]	Min. RL (Return Loss) [dB]	Max./Min. Input Impedance (unFitted)	Max./Min. Fitted Impedance	Min. TCL [dB]	Min. ELTCTL [dB]
0.772 MHz	1.8 dB/100m	81.0 dB	81.0 dB	79.2 dB	79.2 dB	75.0 dB	73.0 dB				42.0 dB	39.2 dB
1 MHz	2.0 dB/100m	79.3 dB	79.3 dB	77.3 dB	77.3 dB	72.8 dB	70.8 dB	20.0 dB	100 ± 12 Ohm	100 ± 12 Ohm	42.0 dB	37.0 dB
4 MHz	3.7 dB/100m	70.3 dB	70.3 dB	66.6 dB	66.6 dB	60.8 dB	58.8 dB	23.0 dB	100 ± 12 Ohm	100 ± 10.4 Ohm	42.0 dB	25.0 dB
8 MHz	5.2 dB/100m	65.8 dB	65.8 dB	60.6 dB	60.6 dB	54.7 dB	52.7 dB	24.5 dB	100 ± 12 Ohm	100 ± 8 Ohm	42.0 dB	18.9 dB
10 MHz	5.8 dB/100m	64.3 dB	64.3 dB	58.5 dB	58.5 dB	52.8 dB	50.8 dB	25.0 dB	100 ± 12 Ohm	100 ± 7.3 Ohm	42.0 dB	17.0 dB
16 MHz	7.4 dB/100m	61.2 dB	61.2 dB	53.9 dB	53.9 dB	48.7 dB	46.7 dB	25.0 dB	100 ± 12 Ohm	100 ± 5.7 Ohm	40.0 dB	12.9 dB
20 MHz	8.3 dB/100m	59.8 dB	59.8 dB	51.5 dB	51.5 dB	46.8 dB	44.8 dB	25.0 dB	100 ± 12 Ohm	100 ± 5 Ohm	39.0 dB	11.0 dB
25 MHz	9.3 dB/100m	58.3 dB	58.3 dB	49.1 dB	49.1 dB	44.8 dB	42.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	38.0 dB	9.0 dB
31.25 MHz	10.4 dB/100m	56.9 dB	56.9 dB	46.5 dB	46.5 dB	42.9 dB	40.9 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	37.1 dB	
62.5 MHz	15.0 dB/100m	52.4 dB	52.4 dB	37.4 dB	37.4 dB	36.9 dB	34.9 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	34.0 dB	
100 MHz	19.3 dB/100m	49.3 dB	49.3 dB	30.0 dB	30.0 dB	32.8 dB	30.8 dB	25.0 dB	100 ± 15 Ohm	100 ± 5 Ohm	32.0 dB	
155 MHz	24.6 dB/100m	46.4 dB	46.4 dB	21.8 dB	21.8 dB	28.9 dB	26.9 dB	22.8 dB	100 ± 15 Ohm	100 ± 5 Ohm	30.1 dB	
200 MHz	28.3 dB/100m	44.8 dB	44.8 dB	16.5 dB	16.5 dB	26.8 dB	24.8 dB	21.6 dB	100 ± 15 Ohm	100 ± 5 Ohm	29.0 dB	
250 MHz	32.1 dB/100m	43.3 dB	43.3 dB	11.2 dB	11.2 dB	24.8 dB	22.8 dB	20.5 dB	100 ± 20 Ohm	100 ± 5 Ohm	28.0 dB	
300 MHz	35.6 dB/100m	42.1 dB	42.1 dB	6.5 dB	6.5 dB	23.3 dB	21.3 dB	20.1 dB	100 ± 20 Ohm	100 ± 5 Ohm		
350 MHz	38.9 dB/100m	41.1 dB	41.1 dB	2.3 dB	2.3 dB	21.9 dB	19.9 dB	19.8 dB	100 ± 22 Ohm	100 ± 5 Ohm		
400 MHz	42.0 dB/100m	38.3 dB	38.3 dB	-3.7 dB	-3.7 dB	20.8 dB	18.8 dB	19.5 dB	100 ± 22 Ohm	100 ± 5 Ohm		
450 MHz	45.0 dB/100m	37.5 dB	37.5 dB			19.7 dB	17.7 dB	18.9 dB	100 ± 22 Ohm	100 ± 5 Ohm		
500 MHz	47.9 dB/100m	36.8 dB	36.8 dB			18.8 dB	16.8 dB	18.4 dB	100 ± 22 Ohm	100 ± 5 Ohm		
550 MHz	50.6 dB/100m	36.2 dB	36.2 dB			18.0 dB	16.0 dB	18.0 dB	100 ± 22 Ohm	100 ± 5 Ohm		
600 MHz	53.3 dB/100m	35.6 dB	35.6 dB			17.2 dB	15.2 dB	17.5 dB	100 ± 22 Ohm	100 ± 5 Ohm		
650 MHz	55.9 dB/100m	35.1 dB	35.1 dB			16.5 dB	14.5 dB	17.2 dB	100 ± 22 Ohm	100 ± 5 Ohm		

Segregation class according EN50174-2:	a

Voltage

UL Voltage Rating
300 V RMS

Temperature Range

Installation Temp Range:	0°C To +50°C
UL Temp Rating:	105°C
Storage Temp Range:	-20°C To +75°C
Operating Temp Range:	-20°C To +75°C

Mechanical Characteristics

Bulk Cable Weight:	31 lbs/1000ft
Max Recommended Pulling Tension:	40 lbs
Min Bend Radius/Minor Axis:	0.5 in
Min Bend Radius/Installation:	2.5 in

Standards

NEC/(UL) Specification:	CMP
CEC/C(UL) Specification:	CMP
ISO/IEC Compliance:	11801 ed 2.2 (2011) Class E
CPR Euroclass:	Eca
Data Category:	Category 6
ANSI Compliance:	S-116-732-2013 Category 6, ANSI/NEMA WC-66 Category 6
Telecommunications Standards:	ANSI/TIA-568-C.2 Category 6
IEEE Specification:	IEEE 802.3bt Type 1, Type 2, Type 3, Type 4
Third Party Performance Verification:	Category 6

Applicable Environmental and Other Programs

EU Directive 2000/53/EC (ELV):	Yes

EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
EU Directive 2003/96/EC (BFR):	Yes
EU Directive 2011/65/EU (ROHS II):	Yes
EU Directive 2012/19/EU (WEEE):	Yes
EU Directive 2015/863/EU:	Yes
EU Directive Compliance:	Yes
EU CE Mark:	Yes
EU REACH SVHC Compliance (yyyy-mm-dd):	2017-07-10
EU RoHS Compliance Date (yyyy-mm-dd):	2009-04-03
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes

Suitability

Suitability - Aerial:	No
Suitability - Burial:	No
Suitability - Hazardous Locations:	No
Suitability - Indoor:	Yes
Suitability - Non-Halogenated:	No
Suitability - Oil Resistance:	No
Suitability - Outdoor:	No
Suitability - Sunlight Resistance:	No

Flammability, LS0H, Toxicity Testing

C(UL) Flammability:	FT6
UL Flammability:	NFPA 262 Plenum (UL 910)
CSA Flammability:	FT6
UL voltage rating:	300 V RMS

Plenum/Non-Plenum

Plenum (Y/N):	Yes

Part Number

Non-Plenum Number:	3632

Variants

Item #	Color	Footnote
3633 0101000	Black	C
3633 010A1000	Black	C
3633 D151000	Blue	C
3633 D15A1000	Blue	C
3633 D15U1000	Blue	
3633 0081000	Gray	C
3633 008A1000	Gray	C
3633 008U1000	Gray	
3633 0051000	Green	C
3633 005A1000	Green	C
3633 0031000	Orange	C
3633 003A1000	Orange	C
3633 0021000	Red	C
3633 002A1000	Red	C
3633 0091000	White	C
3633 009A1000	White	C
3633 009U1000	White	
3633 0041000	Yellow	C
3633 004A1000	Yellow	C

Footnote:	C - CRATE REEL PUT-UP.
Patent:	https://www.belden.com/resources/patents

Product Notes

Notes:	Values above 400 MHz are for Engineering Information Only. Print Includes Descending Footage/Meter Markings from Max. Put-Up Length to 0.